REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 70, 71, and 159 are pending in the application. Claim 70 is the sole independent claim.

The undersigned, and inventors Daozheng Lu and William Feininger, would like to thank Examiner Grant for the cordial and productive interview of April 23, 2002. The Examiner's helpful comments and suggestions were instrumental in preparing this response.

Claims 76-77 are cancelled, thus mooting their rejection under 35 U.S.C. § 102(e) over <u>Aras</u>. For the record, Applicants specifically traverse this rejection on the ground, among others, that <u>Aras</u> fails to disclose or suggest the claimed combinations of structure and/or function whereby an identification code is extracted from a digital multiplexed stream of a first program.

Since Claims 72-76 are also cancelled, their rejection under 35 U.S.C. § 112, first paragraph is also mooted. Again, this rejection is traversed, for reasons which will be more fully developed below.

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Claims 70 and 71 were rejected under 35 U.S.C.
§ 112, first paragraph, for the reasons noted at pages 2-3 of
the Office Action. Applicants respectfully traverse this
rejection. The four points set forth in the Office Action will
be discussed below.

1. "And Radio"

As discussed at the interview, Applicants submit
that the person of ordinary skill in the broadcast signal
technology art would conclude that, as of the time of the
subject application's filing date, the specification provides
proper enablement and written description support for the
claimed feature wherein the audience measurement system applies
to digital television **and radio**.

In particular, Page 1, lines 10-11 of the
specification clearly discloses the monitoring of radio and
television signals: "… the addition of an identifying code to a
radio or television program… ." Moreover, Applicants have
amended the specification to include disclosure from
incorporated-by-reference U.S. Patent No. 5,594,934 (*Daozheng
Lu*, et al.). (See M.P.E.P. §§ 608.01(p) and 2163.07(b)). This
disclosure (part of the originally filed application) clearly

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teaches that the disclosed audience measurement system is for television and **radio**.

Also attached is a Declaration of Michael A. Dolan, declaring that the person of ordinary skill in the broadcast signal technology art, studying the application, would conclude that the application provides proper enablement and written description support for the "and radio" feature present in new dependent Claim 159.

2. "A Control Stream"

As discussed at the interview, Applicants submit that the person of ordinary skill in the broadcast signal technology art would conclude that, as of the time of the subject application's filing date, the specification provides proper enablement and written description support for the claimed feature wherein the multiplexed digital data transmission includes **a control stream** having an identification code.

In more detail, the subject application teaches, in numerous places (such as the sentence bridging pages 42-43, the sentence bridging pages 43-44, and page 44, lines 14-19), the receiving and processing of an **ATSC bitstream**. As demonstrated

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by Mr. Feininger during the interview, the ATSC (Advanced Television Systems Committee) Program/Episode/Version Identification Standard (A/57) from August 30, 1996 (prior to the filing date of the '517 Application) clearly teach the ordinarily skilled artisan that the ATSC bitstream (derived from MPEG-2) includes **a control stream** that has a program identification code. See, for example, the attached A/57 document paragraphs 4.2, 4.4, and 4.5, which refer to a Program Identifier Stream, clearly referring to the program identification code in the control stream. See also the attached SCTE DVS 136 ATSC T3/S8 Doc. 268 (April 3, 1998), which specifically refers to a "**control stream**" in paragraph G3. Thus, the ordinarily skilled artisan would understand the specification as disclosing a control stream having an identification code.

The attached Declaration of Michael A. Dolan makes clear that the person of ordinary skill in the broadcast signal technology art would conclude that the subject application provides proper enablement and written description support for the multiplexed digital data transmission including a control stream having an identification code.

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Moreover, and as also discussed at the interview, the subject application itself clearly teaches, in the paragraph bridging pages 46-47, that the software agent determines whether a received "data packet has a decodable packet label including a decodable **program identification code**." The specification goes on to teach that: "This program identification data packet is expected to be a feature in digital television programming,…", obviously referring to the above-discussed ATSC specification. Clearly, the "control stream" is the "data packet" having the "decodable packet label" that includes the "program identification code." Refer, again, to the Declaration of Michael A. Dolan to confirm this point. Accordingly, Applicants respectfully submit that the subject application provides proper enablement and written description support for the multiplexed digital data transmission including a control stream having an identification code.

3. "When Reception … by the Receiver Begins"

As discussed at the interview, Applicants submit that the person of ordinary skill in the broadcast signal technology art would conclude that, as of the time of the subject application's filing date, the specification provides

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proper enablement and written description support for extracting

the identification code … **when reception of the first (and**

subsequent) channel by the receiver begins.

In particular, extracting program identification

information **"when reception of the channel by the receiver**

begins" is recognized by those of ordinary skill in the art as

being part of TV audience measurement systems at the time the

subject application was filed. For example, the *1987* U.S.

Patent No. 4,697,209 (David Kiewit and *Daozheng Lu*, et al.),

teaches "monitoring the on and off and other functions of the

television receiver" (Column 5, lines 46-49), and the extraction

of program identification signatures in response thereto (Column

4, line 27 through Column 8, line 59).

Furthermore, and as discussed at the interview, the

subject application clearly discloses this feature. See, for

example, is DTV set 110 of Figure 3 obviously includes a

receiver and runs a software agent 118 to measure audience

participation. (See Pages 25-26 of the specification.) Page 46

of the specification teaches that the Figure 7 software agent

500 can be used for the software agent 118.

Referring to Figure 7 and the specification at pages

46-48, when reception by the TV receiver begins, the step 506

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determines whether the data packet has a decodable packet label (including a program identification code). If the data packet does not have a decodable packet label (e.g., the TV receiver has just been turned ON), the step 508 logs (records) the TV receiver as being ON, and then loops the program back through step 506 until a decodable packet label (i.e., one with a program identification code) is found. Once found, the program proceeds to the step 510 where it is determined whether the decodable packet label is the same as the previous one. The answer to this step is NO when the TV receiver is first turned ON, and the program then proceeds to step 512 where the program identification code is extracted and the corresponding program name and time are logged (recorded). Thus, the program identification code in the decodable data packet is extracted when the TV receiver begins receiving a first channel. Accordingly, the specification provides proper enablement and written description support for extracting the identification code … **when reception of the first channel by the receiver begins.**

Returning to Figure 7, when the TV channel is changed, the program proceeds through step 506 to step 510. The step 510 determines that the program identification code in the

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decodable packet label is different from the previous one
(before the channel was changed), and proceeds to step 512 where
the new program identification code is extracted and the new TV
program name and time are logged (recorded). ‚Thus, the program
identification code in the decodable data packet is extracted
when the TV receiver begins receiving a subsequent channel.
Accordingly, the specification provides proper enablement and
written description support for extracting the identification
code ... **when reception of a subsequent channel by the receiver
begins.**

See also the Declaration of Michael A. Dolan, which
confirms the above and declares that the person of ordinary
skill in the broadcast signal technology art would conclude that
the specification provides proper enablement and written
description support for extracting the identification code ...
**when reception of the first (and subsequent) channel by the
receiver begins.**

4.   "<u>Recording the Time When Reception by the</u>
     <u>Receiver is Ended</u>"

As also discussed at the interview, Applicants
submit that the person of ordinary skill in the broadcast signal

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technology art would conclude that, as of the time of the
subject application's filing date, the specification provides
proper enablement and written description support for **recording
the time that the reception by the receiver is ended.**

In particular, recording the time **"when reception by
the receiver ends"** is recognized by those of ordinary skill in
the art as being part of TV audience measurement systems at the
time the subject application was filed. For example, the above-
discussed 1987 U.S. Patent No. 4,697,209 teaches, "a signature
is extracted each time an Event 2 [which includes television
receiver on and off events] is detected. The signature, as well
as the times of occurrence of the signatures are stored to form
a library of reference signatures." (Column 3, lines 58-63).

Furthermore, the subject application clearly teaches
that change-of-status events cause the recording of all
available information: "block 516 [Fig. 7] logs as much detail
as is available…". (See Page 48, second-to-last line.) Step
512 clearly shows that "available information" includes time.
That the receiver being turned OFF is a change-of-status event
is evident to the person of ordinary skill in the art.

Applicants have also amended the specification to
include disclosure from incorporated-by-reference U.S. Patent

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No. 5,481,294 (William Thomas and *Daozheng Lu*).   (See M.P.E.P.

§§ 608.01(p) and 2163.07(b)). This disclosure (part of the

originally filed application) clearly teaches that the disclosed

audience measurement system records the time that the receiver

undergoes an ON/OFF change.

Also, the Declaration of Michael A. Dolan declares

that the person of ordinary skill in the broadcast signal

technology art, studying the application, would conclude that

the application provides proper enablement and written

description support for **recording the time that the reception by**

the receiver is ended.

For the reasons set forth above, Applicants submit

that the pending claims are fully supported by the

specification, as required by 35 U.S.C. § 112, first paragraph.

In view of the above amendments and remarks, it is

believed that this application is now in condition for

allowance, and a Notice thereof is respectfully requested.

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RENEWED REQUEST FOR DECLARATION OF INTERFERENCE

Applicants renew the Request For Declaration Of Interference most recently made in the June 20, 2000 SUPPLEMENTAL PRELIMINARY AMENDMENT AND REQUEST PURSUANT TO 37 C.F.R. § 1.607 FOR DECLARATION OF INTERFERENCE WITH ISSUED U.S. PATENT NO. 5,974,299, and request that an interference be declared on the following basis:

Junior Party:

MASSETTI, Enrico

1. U.S. Patent No. 5,974,299, issued Oct. 26, 1999.

   Priority Benefit of U.S. 09/085,501, filed May 27, 1998.

   Claims corresponding to Count 1: Claims 1-20.

   (all claims).

   Patented Pending Claims: 1-20.

   Claims NOT corresponding to Count 1: None.

   Unpatentable Pending Claims: None.

2. U.S. Application No. 09/289,758, filed April 12, 1999.

   Priority Benefit of 09/085,501, filed May 27,

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1998 (now the '299 Patent).

Claims corresponding to Count 1: All Claims

believed to be Claims 1-20).

Patentable Pending Claims: Unknown.

Claims NOT corresponding to Count 1: None.

Unpatentable Pending Claims: Unknown.

Senior Party:

LU, et al.

     1.   U.S. Application No. 09/076,517, filed May 12,

1998.

Priority Benefit: None.

Claims corresponding to Count 1: Claims 70, 71,

and 159 (all claims).

Patentable Pending Claims: Claims 70, 71, and

159 (all claims).

Claims NOT corresponding to Count 1: None.

Unpatentable Pending Claims: None.

     Applicants propose a single Count, Count 1, which is

identical to Lu's Claim 70, copied in modified form from Claim 1

of Junior Party Massetti's '299 Patent Claim 1, and corresponds

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substantially to previously proposed alternative Count A-2. See

the June 27, 2001 PRELIMINARY AMENDMENT AND REQUEST FOR

DECLARATION OF INTERFERENCE WITH U.S. APPLICATION SERIAL NO.

09/289,758, and the February 15, 2001 PRELIMINARY AMENDMENT AND

REQUEST PURSUANT TO 37 C.F.R. § 1.607 FOR DECLARATION OF

INTERFERENCE WITH ISSUED U.S. PATENT NO. 5,974,299 for

correspondence to the requirements of 37 C.F.R. § 1.607.

Count 1.

An audience rating system for digital television,

comprising the steps of:

extracting at least one identification code for at

least one digital stream of a first channel, from a control

stream of a multiplexed digital transmission, when reception of
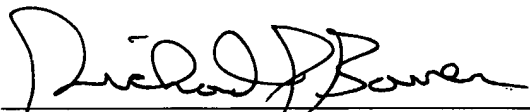
the first channel by a receiver begins;

recording at least one identification code extracted

and thus time reception of the first channel begins;

extracting at least one identification code for at

least one digital stream of any subsequent channel, from the

control stream of the multiplexed digital transmission, when

reception of the subsequent channel by the receiver begins; and

recording at least one identification code extracted and the

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time reception of the subsequent channel begins.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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Marked-up Paragraphs

The paragraph bridging pages 48-49.

If the current operating task does not use a packet of
television programming as determined at a block 504, the
software agent 500 at a block 514 determines whether the current
operating task is a command to other monitored equipment (e.g.,
a command to the digital television receiver 110 to tune a
different channel and to select a particular one of the N
programs being broadcast in that channel). If the current
operating task is a command to other monitored equipment, the
software agent 500 at a block 516 logs as much detail as is
available (e.g., the command itself, the identity of the issuer
of the command, and the identity of the recipient of the
command) in memory, and program flow returns to the block 502.
As described at Column 16, lines 8-29 of U.S. Patent No.
5,481,294 (William Thomas and Daozheng Lu), incorporated
herinabove by reference, a tuning record may be recorded which
includes data corresponding to (1) a flag field, (2) a type
field (e.g., to characterize the signature as having been
extracted in response to different types of conditions, such as

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a scene change, absolute timing, a channel change, a television on/off change, and/or the like), (3) a code field and a program signature field which together contain either a corresponding ancillary code or a corresponding program signature, and (4) a time data field containing the time at which (i) the corresponding ancillary code was detected, or (ii) the corresponding program signature was extracted, or (iii) the corresponding flag was set. A specific example could be generated by turning a television receiver on at a first time and viewing an encoded program until a later time, at which time a new program appeared on that channel and the viewer re-tuned (at yet a later time) to a different channel carrying another program.

The paragraph bridging pages 53-54.

Furthermore, although not shown in Figures 2-5, the digital television reception equipment of the embodiments shown therein may further include auxiliary digital television equipment such as a VCR, a digital video disk player, a video game, or other entertainment systems. As described at Column 6, lines 9-15 of U.S. Patent No. 5,594,934 (Daozheng Lu, et al.),

incorporated hereinabove by reference, program sources may be, for example, AM radio stations for transmitting AM channels, FM radio stations for transmitting FM channels, television stations for transmitting both VHF and UHF television channels, cable head-ends for transmitting cable channels, and/or the like.

<u>Marked-up Claim</u>

70. (Once Amended) An audience rating system for digital television [and radio], comprising the steps of:

extracting at least one identification code for at least one digital stream of a first channel, from a control stream of a multiplexed digital transmission, when reception of the first channel by a receiver begins;

recording at least one identification code extracted and thus time reception of the first channel begins;

extracting at least one identification code for at least one digital stream of any subsequent channel, from the control stream of the multiplexed digital transmission, when reception of the subsequent channel by the receiver begins; and

recording at least one identification code extracted and the time reception of the subsequent channel begins.